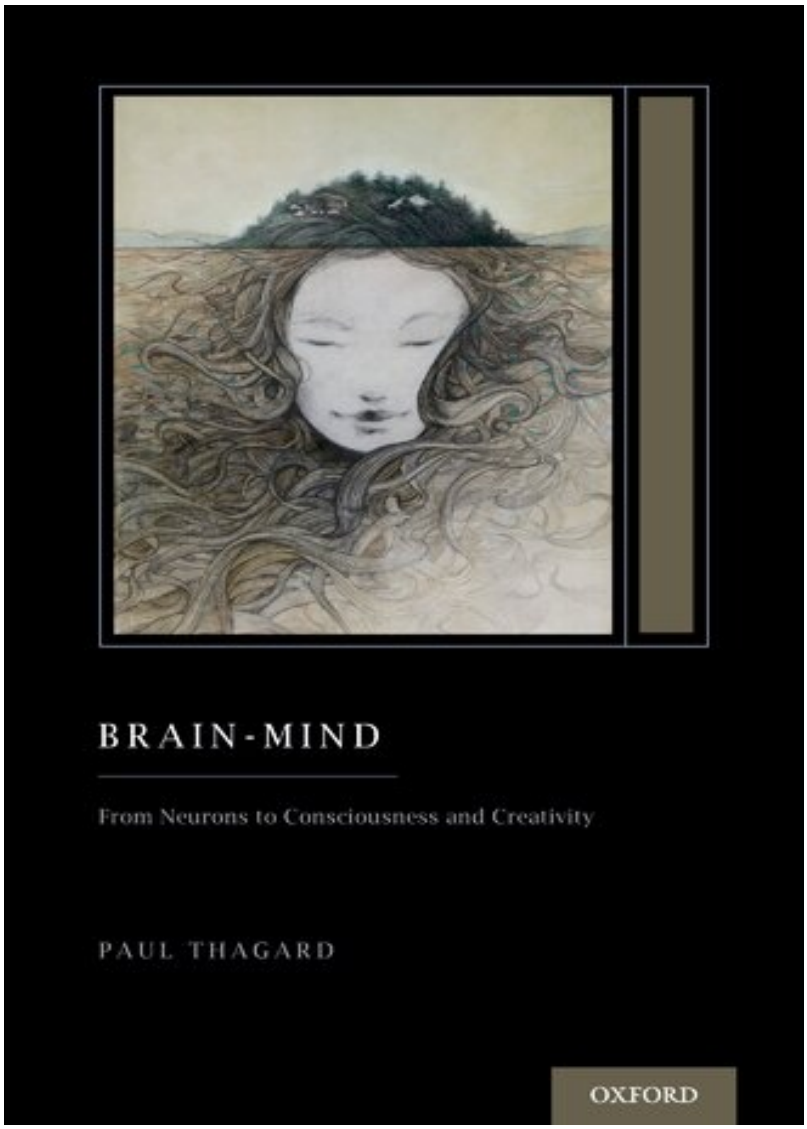
Brain-Mind: From Neurons to Consciousness and Creativity Paul Thagard pdf download

https://ebookmass.com/product/brain-mind-from-neurons-to-consciousness-and-creativity-paul-thagard/

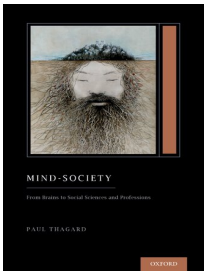


Explore and download more ebooks at ebookmass.com

Here are some recommended products for you. Click the link to download, or explore more at ebookmass.com

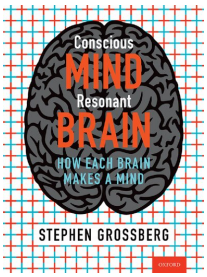
Mind-Society: From Brains to Social Sciences and Professions (Treatise on Mind and Society) (Oxford Series on Cognitive Models and Architectures) Paul Thagard

https://ebookmass.com/product/mind-society-from-brains-to-social-sciences-and-professions-treatise-on-mind-and-society-oxford-series-on-cognitive-models-and-architectures-paul-thagard/



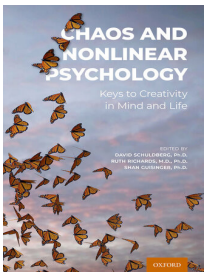
Conscious Mind, Resonant Brain: How Each Brain Makes a Mind Stephen Grossberg

https://ebookmass.com/product/conscious-mind-resonant-brain-how-each-brain-makes-a-mind-stephen-grossberg/



Chaos and Nonlinear Psychology : Keys to Creativity in Mind and Life Shan Guisinger

https://ebookmass.com/product/chaos-and-nonlinear-psychology-keys-to-creativity-in-mind-and-life-shan-guisinger/

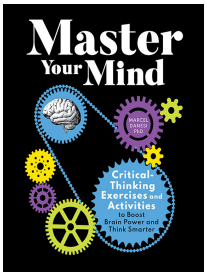


Creativity and English Language Teaching: From Inspiration to Implementation 1st Edition Alan Maley

https://ebookmass.com/product/creativity-and-english-language-teaching-from-inspiration-to-implementation-1st-edition-alan-maley/

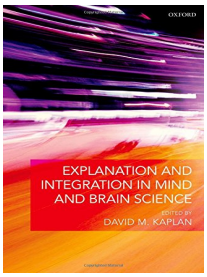
Master Your Mind: Critical-Thinking Exercises and Activities to Boost Brain Power and Think Smarter Marcel Danesi

https://ebookmass.com/product/master-your-mind-critical-thinking-exercises-and-activities-to-boost-brain-power-and-think-smarter-marcel-danesi/



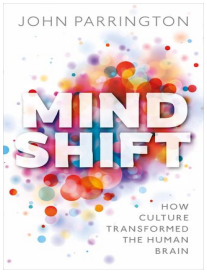
Explanation and Integration in Mind and Brain Science 1st Edition David M. Kaplan

https://ebookmass.com/product/explanation-and-integration-in-mind-and-brain-science-1st-edition-david-m-kaplan/



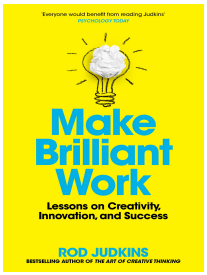
Mind Shift: How Culture Transformed the Human Brain John Parrington

https://ebookmass.com/product/mind-shift-how-culture-transformed-the-human-brain-john-parrington/



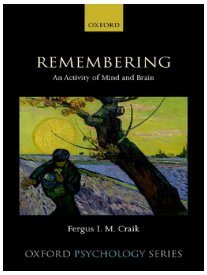
Make Brilliant Work: From Picasso to Steve Jobs, How to Unlock Your Creativity and Succeed Rod Judkins

https://ebookmass.com/product/make-brilliant-work-from-picasso-to-steve-jobs-how-to-unlock-your-creativity-and-succeed-rod-judkins/



Remembering: An Activity of Mind and Brain 1st Edition Fergus I. M. Craik

https://ebookmass.com/product/remembering-an-activity-of-mind-and-brain-1st-edition-fergus-i-m-craik/



BRAIN-MIND

From Neurons to Consciousness and Creativity

PAUL THAGARD

OXFORD

BRAIN–MIND

OXFORD SERIES ON COGNITIVE MODELS AND ARCHITECTURES

Series Editor
Frank E. Ritter

Series Board
Rich Carlson
Gary Cottrell
Robert L. Goldstone
Eva Hudlicka
William G. Kennedy
Pat Langley
Robert St. Amant

Integrated Models of Cognitive Systems
Edited by Wayne D. Gray

In Order to Learn: How the Sequence of Topics Influences Learning
Edited by Frank E. Ritter, Joseph Nerb, Erno Lehtinen, and Timothy O'Shea

How Can the Human Mind Occur in the Physical Universe?
By John R. Anderson

Principles of Synthetic Intelligence PSI: An Architecture of Motivated Cognition
By Joscha Bach

The Multitasking Mind
By David D. Salvucci and Niels A. Taatgen

How to Build a Brain: A Neural Architecture for Biological Cognition
By Chris Eliasmith

Minding Norms: Mechanisms and Dynamics of Social Order in Agent Societies
Edited by Rosaria Conte, Giulia Andrighetto, and Marco Campennì

Social Emotions in Nature and Artifact
Edited by Jonathan Gratch and Stacy Marsella

Anatomy of the Mind: Exploring Psychological Mechanisms and Processes with the Clarion Cognitive Architecture
By Ron Sun

Exploring Robotic Minds: Actions, Symbols, and Consciousness as Self-Organizing Dynamic Phenomena
By Jun Tani

Brain–Mind: From Neurons to Consciousness and Creativity
By Paul Thagard

Mind–Society: From Brains to Social Sciences and Professions
By Paul Thagard

Natural Philosophy: From Social Brains to Knowledge, Reality, Morality, and Beauty
By Paul Thagard

Brain–Mind

FROM NEURONS TO CONSCIOUSNESS AND CREATIVITY

Paul Thagard

OXFORD
UNIVERSITY PRESS

OXFORD
UNIVERSITY PRESS

Oxford University Press is a department of the University of Oxford. It furthers the University's objective of excellence in research, scholarship, and education by publishing worldwide. Oxford is a registered trade mark of Oxford University Press in the UK and certain other countries.

Published in the United States of America by Oxford University Press
198 Madison Avenue, New York, NY 10016, United States of America.

© Oxford University Press 2019

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, without the prior permission in writing of Oxford University Press, or as expressly permitted by law, by license, or under terms agreed with the appropriate reproduction rights organization. Inquiries concerning reproduction outside the scope of the above should be sent to the Rights Department, Oxford University Press, at the address above.

You must not circulate this work in any other form
and you must impose this same condition on any acquirer.

Library of Congress Cataloging-in-Publication Data
Names: Thagard, Paul, author.
Title: Brain–mind : from neurons to consciousness and creativity / Paul Thagard.
Description: New York, NY : Oxford University Press, [2019] |
Includes bibliographical references and index.
Identifiers: LCCN 2018033233 | ISBN 9780190678715
Subjects: LCSH: Cognitive neuroscience. | Mind and body.
Classification: LCC QP360.5 T43 2019 | DDC 612.8/233—dc23
LC record available at https://lccn.loc.gov/2018033233

9 8 7 6 5 4 3 2 1

Printed by Sheridan Books, Inc., United States of America

To Chris, for pointing to the best semantics.

Contents

List of Illustrations xi
Foreword xiii
Preface xv
Acknowledgments xvii

1. *What Are Minds?* 1
    Why Minds Matter 1
    What Are Minds? 2
    Cognitive Science 4
    Representations and Processes 7
    Mechanisms 9
    Looking Ahead 13
    Summary and Discussion 15
    Notes 16
    Project 17

2. *How Brains Make Minds* 18
    Why Brains Matter to Mind and Society 18
    Thinking with Cells 19
    Neurons 19
    Neural Groups 22
    Combining Neural Representations 25
    Semantic Pointers 28
    The Semantic Pointer Architecture 34
    Innateness versus Learning 38
    Summary and Discussion 40
    Appendix: Details and Comparisons 41

Notes 47
Project 49

3. *Perception and Imagery* 50
Why Perception and Imagery Matter to Mind and Society 50
From Sensation to Perception to Imagery 51
External Senses 53
Internal Senses 55
Imagery 56
Mental Mechanisms for Imagery 59
Neural Mechanisms for Imagery 62
Uses of Imagery 66
Summary and Discussion 68
Notes 70
Project 71

4. *Concepts* 72
Why Concepts Matter to Mind and Society 72
Theories of Concepts 73
Neural Mechanisms for Concepts 75
Uses of Concepts 77
Summary and Discussion 89
Notes 91
Project 92

5. *Rules* 93
Why Rules Matter to Mind and Society 93
Mental Mechanisms for Rules 94
Neural Mechanisms for Rules 100
Uses of Rules 103
Summary and Discussion 111
Notes 112
Project 113

6. *Analogies* 114
Why Analogies Matter to Mind and Society 114
Mental Mechanisms for Analogy 116
Neural Mechanisms for Analogy 119
Uses of Analogies 124

Summary and Discussion 127
Notes 130
Project 131

7. *Emotions* 132
Why Emotions Matter to Mind and Society 132
Psychological Theories of Emotion 133
Neural Mechanisms for Emotions 136
Uses of Emotions 143
Summary and Discussion 153
Notes 155
Project 157

8. *Consciousness* 158
Why Consciousness Matters to Mind and Society 158
Psychological Theories of Consciousness 159
Neural Mechanisms for Consciousness 164
Uses of Consciousness 173
Summary and Discussion 176
Notes 178
Project 179

9. *Action and Intention* 180
Why Actions Matter to Mind and Society 180
Psychological Theories of Action, Intention, and Will 182
Neural Mechanisms for Action and Intention 183
Uses of Action and Intention 186
Summary and Discussion 197
Notes 199
Project 200

10. *Language* 201
Why Language Matters to Mind and Society 201
Syntax First: Chomsky 202
Integrating Syntax, Semantics, and Phonology 204
Meaning 209
Conceptual Blending 213
Metaphor 216
Innateness and Language Learning 218

Visit https://ebookmass.com today to explore

a vast collection of ebooks across various genres, available in popular formats like PDF, EPUB, and MOBI, fully compatible with all devices. Enjoy a seamless reading experience and effortlessly download high-quality materials in just a few simple steps. Plus, don’t miss out on exciting offers that let you access a wealth of knowledge at the best prices!

Summary and Discussion 220
Notes 221
Project 222

11. *Creativity* 223
Why Creativity Matters to Mind and Society 223
What Is Creativity? 224
Images 227
Concepts 229
Rules 230
Procedural Creativity 232
Analogies and Metaphors 239
Emotions 242
Case Study: CRISPR/Cas9 244
Summary and Discussion 247
Notes 249
Project 251

12. *The Self* 252
Why the Self Matters to Mind and Society 252
What Is the Self? 253
Semantic Pointers for Self-Representation 257
Semantic Pointer Mechanisms for Self-Effecting and Self-Changing 262
Multilevel Systems 264
Molecular Mechanisms 264
Social Mechanisms 267
Summary and Discussion 271
Notes 274
Project 275

REFERENCES 277
NAME INDEX 295
SUBJECT INDEX 303

List of Illustrations

2.1 Two connected neurons 20
2.2 Neural group with excitatory and inhibitory connections 22
2.3 Sketch of some major regions of the brain 25
2.4 Semantic pointers are neural representations (patterns of firing) formed by binding sensory, motor, emotional, and/or verbal representations, which are also patterns of firing in neural groups 29
2.5 Semantic pointers function to provide inferences 30
2.6 Competition between semantic pointers 32
2.7 Functioning of the Semantic Pointer Architecture 35
2.8 Simple constraint network for deciding whether to eat a banana 37
3.1 Ambiguous pictures that can be perceived in different ways depending on context and focus 55
3.2 Eiffel Tower rotated to be upside down 57
3.3 Generation of the visual image of a giraffe 65
4.1 Concept unicorn formed by conceptual combination of *horse* and *horned* 81
4.2 Neural network for competition between three concepts to determine which one best categorizes sensory input 84
4.3 The belief that the squirrel chases the rabbit results from recursive binding 85
5.1 Neural representation of a rule *if representation1 then representation2* as a semantic pointer 101
6.1 Visual representation of the analogy between the solar system and the atom 120
6.2 Semantic pointer representation of the solar system 120
7.1 A semantic pointer for an emotion binds the representations of a situation, physiological reaction, cognitive appraisal, and self 137

7.2 Expanded semantic pointer for emotion, with external sensory representations for the situation, internal sensory representations for physiology, and an expanded depiction of cognitive appraisal 140
8.1 Competition for attention among texting, working, and driving 165
9.1 How intentions are formed by binding representations of a situation, evaluation, doing, and self 184
9.2 Model of intention with interactions of brain areas leading to action 185
9.3 Transitions between fast and slow modes resulting from semantic pointer mechanisms 193
10.1 Mental representation of a word as a semantic pointer integrating phonology, syntax, and semantics 205
10.2 Mental representation of a sentence as a semantic pointer integrating parts of speech, each of which is a semantic pointer combining sound, grammar, and meaning 207
11.1 Sketch of the mechanism by which CRISPR and Cas9 fight viruses 245
12.1 Grouping of many self-phenomena into six main classes: self-representing (with three subcategories), self-effecting (with two subcategories), and self-changing 254
12.2 Semantic pointer for the self, resulting from binding other neural representations 257
12.3 Diagram of the self as a multilevel system 265

Foreword

Frank E. Ritter

THREE DECADES AGO, Newell, Anderson, and Simon shared a desire for a unified theory of how cognition arises and what a mechanistic explanation would look like. Today, much still remains to be done to pursue that desire, but much has been accomplished.

Allen Newell talked about narrow and deep theories, and broad and shallow theories, and that theories could differ in these ways. Many psychology theories are deep, explaining a few phenomena in great detail but not explaining many phenomena nor how they interact and mutually constrain each other.

In the trio of books making up his treatise, Paul Thagard creates a much broader and more accessible explanation than we have seen before of what a mechanistic explanation of mind and human behavior would look like. These books explain the cognitive science approach to cognition, learning, thinking, emotion, and social interaction—much of what it means to be human—and what this means for a wide variety of sciences and philosophy. His treatise provides a good overview of cognitive science and its implications. Different readers will be drawn to the treatise in different ways. It does not matter where they start. In this book, *Brain–Mind,* Thagard explains how the semantic pointer architecture (SPA) by Chris Eliasmith, Thagard's colleague at the University of Waterloo, can be used to explain the mind, cognition, and related concepts. The SPA architecture is a very useful dynamic theory that can do multiple tasks in the same model, and it is explained in journal

articles and by Eliasmith's (2013) book in the Oxford Series on Cognitive Models and Architectures. Most of the implications based on SPA are also supported by and have lessons for other computational models of cognition, so these books can be useful to users of other cognitive architectures.

In his book, *Mind–Society,* Thagard examines what this approach means for social science and related professional fields, and the mechanisms account for successes and failures of major professional activities. In his book, *Natural Philosophy,* he examines what this approach means for philosophy, including important topics of philosophy of mind and of beauty. This book provides a useful and engaging overview of philosophy, particularly for those interested in cognitive science or working in cognitive science.

These books introduce several useful theories and methods about how to do science as well. Beyond allowing and using explanations via multilevel mechanisms, particularly helpful are Thagard's introduction and use of three-analysis for definitions and coherence. The three-analysis definitions are a way to explain concepts without using simple definitions. They define a concept using *exemplars, typical features,* and *explanations*. This approach resolves several problems with simple dictionary definitions.

Also valuable is the development of coherence as a concept for reasoning. Coherence is used in this book as a way to describe the quality of theories—that theories are not just good when they predict a single result, but how they cohere with multiple sources of data and with other theories. Coherence is hard to quantify itself, but it is clearly useful. But the use of coherence is not just normative—we should use it—it is also descriptive in that scientists and laypersons appear to already use it, at least implicitly. Making the use of coherence explicit will help us to apply, teach, and improve the process.

Not only will these books be helpful to cognitive scientists and those interested in cognitive science, they will also appeal to those who simply want to learn more about the world and cognition—they offer one of the best and broadest explanations we have for cognition. Thus, humanists and social scientists interested in knowing how cognitive science works will find some answers here.

These books contain powerful ideas by one of the most highly cited living philosophers. They can change the way you think about the world, including brains and mind, and how you might think that the mind works and interacts with the world. Thagard calls these trio of books a treatise, and I found them so compelling that I've decided to use them in a course this next semester.

REFERENCE

Eliasmith, C. (2013). *How to build a brain: A neural architecture for biological cognition*. New York, NY: Oxford University Press.

Preface

THIS BOOK BELONGS to a trio (Treatise on Mind and Society) that can be read independently:

Brain–Mind: From Neurons to Consciousness and Creativity
Mind–Society: From Brains to Social Sciences and Professions
Natural Philosophy: From Social Brains to Knowledge, Reality, Morality, and Beauty.

Brain–Mind presents a unified, brain-based theory of cognition and emotion with applications to the most complex kinds of thinking, right up to consciousness and creativity. Unification comes from systematic application of Chris Eliasmith's powerful Semantic Pointer Architecture, a highly original synthesis of neural network and symbolic ideas about how the mind works. I show the relevance of semantic pointers to a full range of important kinds of mental representations, from sensations and imagery to concepts, rules, analogies, and emotions. Neural mechanisms can then be used to explain many phenomena concerning consciousness, action, intention, language, creativity, and the self.

Because of their broad importance, I have tried to make Chris's ideas accessible to a broad audience with no special background in neuroscience or mathematics. For readability, I have omitted references from the main text, but extensive

citations are in the Notes section at the end of each chapter. These references also point to papers that provide the mathematical and computational details too technical for general presentation. Most of my papers can be found via paulthagard.com, which also contains live links for the URLs in this book.

The value of a unified theory of thinking goes well beyond psychology, neuroscience, and the other cognitive sciences. *Mind–Society* melds the mental mechanisms in this book with complementary social mechanisms to explain a wide range of social phenomena. The result is an integrated account of six social sciences (social psychology, sociology, politics, economics, anthropology, and history) and five professions (medicine, law, education, engineering, and business). *Natural Philosophy* considers the implications for the humanities of the resulting account of mind, brain, and society. The main topic is philosophy, with a systematic treatment of fundamental questions about knowledge, reality, morality, and meaning. But the book also shows the relevance of neural-social explanations to the arts, especially painting and music.

The goal of this trio of books is to harmonize the cognitive sciences, social sciences, professions, and humanities as a coherent system of thought, not to reduce one to the other. I call my general approach *social cognitivism,* because it combines cognitive neuroscience (including a heavy emphasis on emotions) with social processes of communication. Social cognitivism is not a new field but rather an integrated theoretical approach to thought, society, and values.

Brain–Mind has a distant ancestor in my textbook *Mind: Introduction to Cognitive Science* (first edition, 1996; second edition, 2005). That book covered some of the same ground by considering different kinds of cognitive theories (e.g., rules and neural networks) and several challenges to the whole enterprise of cognitive science (e.g., consciousness and embodiment). The last decade has brought major advances that make it now possible to unify what were once disparate theoretical approaches and to provide plausible answers to all of the challenges.

Acknowledgments

MOST OF THIS book was newly written in 2014–2018, but I have incorporated some extracts from other works, as indicated in the notes and in the figure and table captions. I have also used some paragraphs from my *Psychology Today* blog, *Hot Thought*, for which I hold the copyright.

I have benefitted enormously from the ideas of numerous collaborators, especially Chris Eliasmith, Tobias Schröder, and Terry Stewart. I am grateful for 23 years of grant support from the Natural Sciences and Engineering Research Council of Canada. My students in PHIL 371 furnished valuable corrections to an earlier draft, especially Lucas Connors and Louise Upton. For helpful suggestions, I am grateful to William Bechtel, Richard Carlson, Shawn Clark, Christopher Dancy, William Kennedy, Laurette Larocque, Marcin Milkowski, Jonathan Morgan, Steve Read, Frank Ritter, Jose Soto, and anonymous reviewers. I thank Joan Bossert for editorial advice, Phil Velinov and Shanmuga Priya for organizing production, Alisa Larson for skilled copyediting, and Kevin Broccoli for professional indexing. CBC Radio 2 and Apple Music provided the accompaniment.

1

What Are Minds?

WHY MINDS MATTER

Marvin Minsky wrote: "What magical trick makes us intelligent? The trick is that there is no trick. The power of intelligence stems from our vast diversity, not from any single, perfect principle." This book will argue that the diversity of mind that makes people intelligent comes from different kinds of mental structures such as images, concepts, rules, analogies, and emotions. But this diversity has an underlying unity, because all of these structures come from the same basic set of brain processes. Intelligence—the capacity to solve problems, learn, understand, reason, act, and manage other mental functions—requires neural mechanisms for representation, transformation, and competition. All these mechanisms employ special neural entities that Chris Eliasmith calls *semantic pointers*, whose operation will be explained in chapter 2.

Why should you care about how the mind works? The answer is easy if you are interested in topics like these: good decisions, personal relationships, mental health, language, emotions, consciousness, free will, creativity, politics, economics, history, literature, music, religion, artificial intelligence, robots, or human–machine interaction. Engaging in these concerns requires a mind that enables you to think about what you are doing when you pursue them on your own or through interactions with other people. Knowing how the mind works, and why it sometimes fails to work well, should help you to understand the successes and failures of people in the full range of human pursuits.

Visit https://ebookmass.com today to explore

a vast collection of ebooks across various genres, available in popular formats like PDF, EPUB, and MOBI, fully compatible with all devices. Enjoy a seamless reading experience and effortlessly download high-quality materials in just a few simple steps. Plus, don’t miss out on exciting offers that let you access a wealth of knowledge at the best prices!

Exploring the Variety of Random Documents with Different Content

DEMONIALITY

OR

Incubi and Succubi

BY THE REV. FATHER

SINISTRARI OF AMENO

(17th CENTURY)

Now first translated into English
With the Latin Text

PARIS

Isidore LISEUX, 2. Rue Bonaparte

1879

DEMONIALITY

OR

Incubi and Succubi

BY THE REV. FATHER

SINISTRARI OF AMENO

(17th CENTURY)

Now first translated into English
With the Latin Text

PARIS

Isidore **LISEUX**, *2. Rue Bonaparte*

1879

The Project Gutenberg eBook of Demoniality; or, Incubi and Succubi

This ebook is for the use of anyone anywhere in the United States and most other parts of the world at no cost and with almost no restrictions whatsoever. You may copy it, give it away or re-use it under the terms of the Project Gutenberg License included with this ebook or online at www.gutenberg.org. If you are not located in the United States, you will have to check the laws of the country where you are located before using this eBook.

Title: Demoniality; or, Incubi and Succubi

Author: Ludovico Maria Sinistrari

Translator: Isidore Liseux

Release date: February 26, 2017 [eBook #54243]
Most recently updated: October 23, 2024

Language: English, Latin

Credits: Produced by deaurider, Les Galloway and the Online Distributed Proofreading Team at http://www.pgdp.net

*** START OF THE PROJECT GUTENBERG EBOOK DEMONIALITY; OR, INCUBI AND SUCCUBI ***

DEMONIALITY

OR

INCUBI AND SUCCUBI

A TREATISE

wherein is shown that there are in existence on earth rational creatures besides man, endowed like him with a body and a soul, that are born and die

BY THE REV. FATHER
SINISTRARI OF AMENO

(17th century)

Published from the original Latin manuscript discovered in London in the year 1872, and translated into French by ISIDORE LISEUX
Now first translated into English
With the Latin Text.

PARIS
Isidore LISEUX, 2, Rue Bonaparte.

1879

PREFACE

TO THE FIRST EDITION (*Paris, 1875, in-8°*)

was in London in the year 1872, and I hunted after old books:

Car que faire là bas, à moins qu'on ne bouquine?[1]

They caused me to live in past ages, happy to escape from the present, and to exchange the petty passions of the day for the peaceable intimacy of Aldus, Dolet or Estienne.

One of my favourite booksellers was Mr Allen, a venerable old gentleman, whose place of business was in the Euston road, close to the gate of Regent's park. Not that his shop was particularly rich in dusty old books; quite the reverse: it was small, and yet never filled. Scarcely four or five hundred volumes at a time, carefully dusted, bright, arrayed with symmetry on shelves within reach of one's hand; the upper shelves remained unoccupied. On the right, Theology; on the left, the Greek and Latin Classics in a majority, with some French and Italian books; for such were Mr Allen's specialties; it seemed as if he absolutely ignored Shakespeare and Byron, and as if, in his mind, the literature of his country did not go beyond the sermons of Blair or Macculloch.

What, at first sight, struck one most in those books, was the moderateness of their price, compared with their excellent state of preservation. They had evidently not been bought in a lot, at so much a cubic yard, like the rubbish of an auction, and yet the handsomest, the most ancient, the most venerable from their size, folios or quartos, were not marked higher than 2 or 3 shillings; an octavo was sold 1 shilling, the duodecimo six pence: each according

to its size. Thus ruled Mr Allen, a methodical man, if ever there was one; and he was all the better for it, since, faithfully patronized by clergymen, scholars and collectors, he renewed his stock at a rate which more assuming speculators might have envied.

But how did he get those well bound and well preserved volumes, for which, everywhere else, five or six times more would have been charged? Here also Mr Allen had his method, sure and regular. No one attended more assiduously the auctions which take place every day in London: his stand was marked at the foot of the auctioneer's desk. The rarest, choicest books passed before his eyes, contended for at often fabulous prices by Quaritch, Sotheran, Pickering, Toovey, and other bibliopolists of the British metropolis; Mr Allen smiled at such extravagance; when once a bid had been made by another, he would not add a penny, had an unknown *Gutenberg* or *Valdarfer's Boccaccio* been at stake. But if occasionally, through inattention or weariness, competition slackened (*habent sua fata libelli*), Mr Allen came forward: *six pence!*, he whispered, and sometimes the article was left him; sometimes even, two consecutive numbers, joined together for want of having separately met with a buyer, were knocked down to him, still for the minimum of six pence which was his maximum.

Many of those slighted ones doubtless deserved their fate; but among them might slip some that were not unworthy of the honours of the catalogue, and which, at any other time, buyers more attentive, or less whimsical might perhaps have covered with gold. This, however, did not at all enter into Mr Allen's calculation: the size was the only rule of his estimate.

Now, one day when, after a considerable auction, he had exhibited in his shop purchases more numerous than usual, I especially noticed some manuscripts in the Latin language, the paper, the writing and the binding of which denoted an Italian origin, and which might well be two hundred years old. The title of one was, I believe: *De Venenis*; of another: *De Viperis*; of a third (the present work): *De Dæmonialitate, et Incubis, et Succubis*. All three,

moreover, by different authors, and independent of each other. Poisons, adders, demons, what a collection of horrors! yet, were it but for civility's sake, I was bound to buy something; after some hesitation, I chose the last one: Demons, true, but Incubi, Succubi: the subject is not vulgar, and still less so the way in which it seemed to me to have been handled. In short, I had the volume for six-pence, a boon price for a quarto: Mr Allen doubtless deemed such a scrawl beneath the rate of type.

That manuscript, on strong paper of the 17th century, bound in Italian parchment, and beautifully preserved, has 86 pages of text. The title and first page are in the author's hand, that of an old man; the remainder is very distinctly written by another, but under his direction, as is testified by autographic side notes and rectifications distributed all through the work. It is therefore the genuine original manuscript, to all appearances unique and inedited.

Our dealer in old books had purchased it a few days before at Sotheby's House, where had taken place (from the 6th to the 16th of December 1871) the sale of the books of baron Seymour Kirkup, an English collector, deceased in Florence. The manuscript was inscribed as follows on the sale catalogue:

> Nº 145. Ameno (*R. P. Ludovicus Maria* [Cotta] de). De Dæmonialitate, et Incubis, et Succubis, *Manuscript.*
>
> *Sæc. XVII-XVIII.*

Who is that writer? Has he left printed works? That is a question I leave to bibliographers; for, notwithstanding numerous investigations in special dictionaries, I have been unable to ascertain any thing on that score. Brunet (*Manuel du libraire*, art. Cotta d'Ameno) vaguely surmises his existence, but confuses him with his namesake, most likely also his fellow-townsman, Lazaro Agostino Cotta of Ameno, a barrister and literary man of Novara. "The author," says he, "whose real Christian names would seem to be *Ludovico-Maria*, has written many serious works...." The mistake is obvious. One thing is sure:

our author was living in the last years of the 17th century, as appears from his own testimony, and had been a professor of Theology in Pavia.

Be that as it may, his book has seemed to me most interesting in divers respects, and I confidently submit it to that select public for whom the invisible world is not a chimera. I should be much surprised if, after opening it at random, the reader was not tempted to retrace his steps and go on to the end. The philosopher, the confessor, the medical man will find therein, in conjunction with the robust faith of the middle ages, novel and ingenious views; the literary man, the curioso, will appreciate the solidity of reasoning, the clearness of style, the liveliness of recitals (for there are stories, and delicately told). All theologians have devoted more or less pages to the question of material intercourse between man and the demon; thick volumes have been written about witchcraft, and the merits of this work were but slender if it merely developed the ordinary thesis; but such is not its characteristic. The ground-matter, from which it derives a truly original and philosophical stamp, is an entirely novel demonstration of the existence of Incubi and Succubi, as rational animals, both corporeal and spiritual like ourselves, living in our midst, being born and dying like us, and lastly redeemed, as we are, through the merits of Jesus-Christ, and capable of receiving salvation or damnation. In the Father of Ameno's opinion, those beings endowed with senses and reason, thoroughly distinct from Angels and Demons, pure spirits, are none other but the Fauns, Sylvans and Satyrs of paganism, continued by our Sylphs, Elfs and Goblins; and thus is connected anew the link of belief. On this score alone, not to mention the interest of details, this book has a claim to the attention of earnest readers: I feel convinced that attention will not be found wanting.

I. L.

May 1875.

The foregoing advertisement was *composed* at the printer's, and ready for the press, when, strolling on the quays[2], I met by chance with a copy of the *Index librorum prohibitorum*. I mechanically opened it, and the first thing that struck my eyes was the following article:

De Ameno Ludovicus Maria. *Vide* Sinistrari.

My heart throbbed fast, I must confess. Was I at last on the trace of my author? Was it *Demoniality* that I was about to see nailed to the pillory of the *Index*? I flew to the last pages of the formidable volume, and read:

SINISTRARI (Ludovicus Maria) de Ameno, De Delictis et Pœnis Tractatus absolutissimus. *Donec corrigatur. Decret. 4 Martii 1709.*

Correctus autem juxta editionem Romanam anni 1753 permittitur.

It was indeed he. The real name of the Father of Ameno was *Sinistrari*, and I was in possession of the title of one at least of those "serious works" which Brunet the bibliographer alluded to. The very title, *De Delictis et Pœnis*, was not unconnected with that of my manuscript, and I had reason to presume that *Demoniality* was one of the offenses inquired into, and decided upon, by Father Sinistrari; in other words, that manuscript, to all appearances inedited, was perhaps published in the extensive work revealed to me; perhaps even was it to that monography of *Demoniality* that the *Tractatus de Delictis et Pœnis* owed its condemnation by the Congregation of the *Index*. All those points required looking into.

But it is necessary to have attempted investigations of that kind in order to appreciate the difficulties thereof. I consulted the catalogues of ancient books that came in my way; I searched the back-shops of the dealers in old books, the *antiquaries*, as they say in Germany, addressing especially to the two or three firms who in Paris apply themselves to old Theology; I wrote to the principal booksellers in London, Milan, Florence, Rome, Naples: all to no purpose; the very name of Father Sinistrari of Ameno seemed to be

unknown. I should perhaps have begun by enquiring at our National Library; I was obliged to resort to it, and there at least I obtained an incipient gratification. I was shown two works by my author: a quarto of 1704, *De incorrigibilium expulsione ab Ordinibus Regularibus*, and the first tome of a set of his complete works: *R. P. Ludovici Mariæ Sinistrari de Ameno Opera omnia* (*Romæ, in domo Caroli Giannini, 1753-1754*, 3 vol. in-folio). Unfortunately that first tome contained but the *Practica Criminalis Minorum illustrata*; *De Delictis et Pœnis* was the subject matter of the third tome, which, as well as the second, was missing at the Library.

Yet, I had a positive indication, and I pursued my investigations. I might be more fortunate at the Library of St Sulpice Seminary. True, it is not open to the public; but then, the Sulpician Fathers are hospitable: did they not of yore afford a refuge to repentant Des Grieux, and did not Manon Lescaut herself tread the flags of their parlour? I therefore ventured into the holy House; it was half past twelve, dinner was nearly over; I asked for the librarian, and after a few minutes, I saw coming to me a short old man, unexceptionably civil, who, leading me through the common parlour, introduced me into another much narrower, a mere cell, looking into a gallery and glazed full breadth, being thus exposed to every eye. An ingenious provision of which Des Grieux's escape had fully shown the urgency. I had no small trouble in explaining the object of my visit to the good Father, who was deaf and near sighted. He left me to go to the library, and soon returned, but empty handed: there also, in that sanctuary of Catholic Theology, Father Sinistrari of Ameno was entirely unknown. But one more expedient could I try: namely, to go to his brothers in St Francis, the Capuchin Fathers, in their convent of rue de la Santé! A cruel extremity, it will be granted, for I had but little chance of meeting there, as here, the lovely shadow of Manon.

At last a letter from Milan put an end to my perplexity. The unfindable book was found; I received at the same time the first edition of *De Delictis et Pœnis* (*Venetiis, apud Hieronymum Albricium, 1700*), and the edition of *Rome, 1754*.

It was a complete treatise, *tractatus absolutissimus*, upon all imaginable crimes, offenses and sins; but, let us hasten to say, in both those voluminous folios, *Demoniality* occupies scarcely five pages, without any difference in the text between the two editions. And those five pages are not even a summary of the manuscript work which I now give forth; they only contain the proposition and conclusion (N^rs^ 1 to 27 and 112 to 115). As for that wherein lies the originality of the book, to wit the theory of rational animals, Incubi and Succubi, endowed like ourselves with a body and soul, and capable of receiving salvation and damnation, it were vain to look for it.

Thus, after so many endeavours, I had settled all the points which I had intended to elucidate: I had discovered the identity of the Father of Ameno[3]; from the comparison of the two editions of *De Delictis et Pœnis*, the first condemned, the second allowed by the Congregation of the *Index*, I had gathered that the printed fragments of *Demoniality* had nothing to do with the condemnation of the book, since they had not been submitted to any correction; lastly, I had become convinced that, save a few pages, my manuscript was absolutely inedited. A happy event of a bibliographical Odyssey which I shall be excused for relating at length, for the "jollification" of bibliophiles "and none other".

ISIDORE LISEUX.

August 1875.

DEMONIALITY
OR
INCUBI AND SUCCUBI

DÆMONIALITAS DEMONIALITY

Vocabulum Dæmonialitatis *primo inventum reperio a Jo. Caramuele in sua* Theologia fundamentali, *nec ante illum inveni Auctorem, qui de hoc crimine tanquam distincto a* Bestialitate *locutus sit. Omnes enim Theologi Morales, secuti D. Thomam, 2.2., q. 154.* in corp., *sub specie* Bestialitatis *recensent* omnem concubitum cum re non ejusdem speciei, *ut ibi loquitur D. Thomas; et proinde Cajetanus, in Commentario illius quæstionis et articuli, 2.2., q. 154., ad 3. dub., coitum cum Dæmone ponit in specie Bestialitatis; et Cajetanum sequitur Silvester, v° Luxuria, de Matrim., q. 4., et alii.*

The first author who, to my knowledge, invented the word *Demoniality* is John Caramuel, in his *Fundamental Theology*, and before him I find no one who distinguished that crime from *Bestiality*. Indeed, all Theological Moralists, following in the train of S. Thomas (2, 2, question 154), include, under the specific title of *Bestiality*, "*every kind of carnal intercourse with any thing whatever of a different species*": such are the very words used by S. Thomas. Cajetanus, for instance, in his commentary on that question, classes intercourse with the Demon under the description of Bestiality; so does Sylvester, *de Luxuria*, Bonacina, *de Bonacina*, de Matrim., *q. 4., et alii.*

Matrimonio, question 4, and others.

2. *Sed revera D. Thomas in illo loco considerationem non habuit ad coitum cum Dæmone: ut enim infra probabimus, hic coitus non potest in specie specialissima* Bestialitatis *comprehendi; et ut veritati cohæreat sententia S. Doctoris, dicendum est, quod in citato loco, quando ait, quod peccatum contra naturam,* alio modo si fiat per concubitum ad rem non ejusdem speciei, vocatur Bestialitas: *sub nomine* rei non ejusdem speciei *intellexerit* 2. However it is clear that in the above passage S. Thomas did not at all allude to intercourse with the Demon. As shall be demonstrated further on, that intercourse cannot be included in the very particular species of *Bestiality*; and, in order to make that sentence of the holy Doctor tally with truth, it must be admitted that when saying of the unnatural sin, "*that committed through intercourse with a thing of different species, it takes the name of Bestiality*", S. Thomas, by *a thing of different species*, means a living animal, of another species than man: for he could not here use the word *thing* in its most general sense, to mean indiscriminately an animate or inanimate being. In fact, if a man should fornicate *cum homine (maxime apud cadavere humano*, he would have to do with a thing of a species quite different from his own (especially according to the Thomists, who deny the form of human corporeity in a corpse); similarly *si cadaveri bestiali copularetur*: and yet, *talis coitus* would not be bestiality, but pollution. What therefore S.

animal vivens, non ejusdem speciei cum homine: non enim usurpare potuit ibi nomen rei *pro re, puta, ente communi ad animatum et inanimatum: si enim quis coiret cum cadavere humano, concubitum haberet ad rem non ejusdem speciei cum Thomistas, qui formam corporeitatis humanæ negant in cadavere), quod etiam esset si cadaveri bestiali copularetur; et tamen talis coitus non esset bestialitas, sed mollities. Voluit igitur ibi D. Thomas præcise vivente non ejusdem speciei cum*

homine, hoc est cum bruto, nullo autem modo comprehendere voluit coitum cum Dæmone.

Thomas intended here to specify with preciseness, is carnal intercourse with a living thing of a species different from man, that is to say, with a beast, and he never in the least thought of intercourse with the Demon.

3. *Coitus igitur cum Dæmone, sive Incubo, sive Succubo (qui proprie est* Dæmonialitas, *specie differt a Bestialitate, nec cum ea facit unam speciem specialissimam, ut opinatus est Cajetanus: peccata enim contra naturam specie inter se distingui contra opinionem nonnullorum Antiquorum, et Caramuelis,* Summ., *Armill., v.* Luxur., *n. 5.,* Jabien., *eo. v. n. 6., Asten. lib. 2. tit. 46. art. 7., Caram.* Theol. fundam. *post Filliucium, et Crespinum a Borgia, est opinio communis; et contraria est damnata in proposit. 24. ex damnatis ab Alexandro VII.; tum quia singula continent peculiarem, et distinctam turpitudinem repugnantem castitati, et humanæ generationi; tum quia quodlibet ex iis privat bono aliquo secundum naturam, et institutionem actus venerei, ordinati ad finem generationis humanæ; tum quia quodlibet ipsorum habet diversum*

3. Therefore, intercourse with the Demon, whether Incubus or Succubus (which is, properly speaking, *Demoniality*), differs in kind from Bestiality, and does not in connexion with it form one very particular species, as Cajetanus wrongly gives it; for, whatever may have said to the contrary some Ancients, and later Caramuel in his *Fundamental Theology*, unnatural sins differ from each other most distinctly. Such at least is the general doctrine, and the contrary opinion has been condemned by Alexander VII: first, because each of those sins carries with itself its peculiar and distinct disgrace, repugnant to chastity and to human generation; secondly, because the commission thereof entails each time the sacrifice of some good by its nature attached to the institution of the venereal act, the normal end of which is human generation; lastly,

motivum, per se sufficiens ad because they each have a *privandum eodem bono* different motive which in itself is *diversimode, ut optime* sufficient to bring about, in *philosophatur Filliuc., tom. 2. c.* divers ways, the deprivation of *8. tract. 30. q. 3. n° 142; Cresp.,* the same good, as has been *q. mor. sel. contro.; Caramuel.,* clearly shown by Fillucius, *q. 5.* per tot. Crespinus and Caramuel.

4. *Ex his autem infertur, quod* 4. It follows that Demoniality *etiam Dæmonialitas specie* differs in kind from Bestiality, for *differt a Bestialitate: singula* each has its peculiar and distinct *enim ipsarum peculiarem et* disgrace, repugnant to chastity *distinctam turpitudinem, castitati* and human generation. Bestiality *ac humanæ generationi* is connexion with a living beast, *repugnantem, involvit; siquidem* endowed with its own peculiar *Bestialitas est copula cum bruto* senses and impulses; *vivente, ac sensibus et motu* Demoniality, on the contrary, is *proprio prædito: Dæmonialitas* copulation with a corpse *autem est commixtio cum* (according at least to the general *cadavere (stando in sententia* doctrine which shall be *communi, quam infra* considered hereafter), a *examinabimus), nec sensum, nec* senseless and motionless corpse *motum vitalem habente; et per* which is but accidentally moved *accidens est, quod a Dæmone* through the power of the *moveatur. Quod si immunditia* Demon. Now, if fornication with *commissa cum brutali cadavere,* the corpse of a man, a woman, *vel humano, differt specie a* or a beast differs in kind from *Sodomia et Bestialitate, ab ista* Sodomy and Bestiality, there is *differt pariter specie etiam* the same difference with regard Dæmonialitas, *in qua, juxta* to *Demoniality*, which, according *communem sententiam, homo* to general opinion, is the *cum cadavere concumbit* intercourse of man with a corpse *accidentaliter moto.* accidentally set in motion.

5. *Et confirmatur: quia in* 5. Another proof: in sins against *peccatis contra naturam,* nature, the unnatural semination *seminatio innaturalis (hoc est, ea* (which cannot be regularly

ad quam regulariter non potest followed by generation) is a *sequi generatio) habet rationem* genus; but the object of such *generis; subjectum vero talis* semination is the difference *seminationis est differentia* which marks the species under *constituens species sub tali* the genus. Thus, whether *genere: unde si seminatio fiat in* semination takes place on the *terram, aut corpus inanime, est* ground, or on an inanimate body, *mollities; si fiat cum homine in* it is pollution; if *cum homine in vase præpostero, est Sodomia; si vase præpostero*, it is Sodomy; *fiat cum bruto, est bestialitas:* with a beast, bestiality: crimes *quæ absque controversia inter se* which unquestionably all differ *specie differunt, eo quod terra,* from each other in species, just *seu cadaver, homo, et brutum,* as the ground, the corpse, the *quæ sunt subjecta talis* man and the beast, passive *seminationis, specie differunt* objects *talis seminationis*, differ *inter se. Sed Dæmon a bruto* in species from each other. But *non solum differt specie, sed* the difference between the *plusquam specie: differunt enim* Demon and the beast is not only *per corporeum, et incorporeum,* specific, it is more than specific: *quæ sunt differentiæ genericæ.* the nature of the one is *Sequitur ergo quod seminationes* corporeal, of the other *factæ cum aliis differunt inter se* incorporeal, which makes a *specie, quod est intentum.* generic difference. Whence it follows that *seminationes* practised on different objects differ in species from each other: and that is substantiated.

6. *Pariter, trita est doctrina* 6. It is also a trite doctrine with *Moralistarum fundata in* Moralists, established by the *Tridentino, sess. 14, c. 5. D. Th.* Council of Trent, session 14, and *in 4. dist. 16. q. 3. art. 2.,* admitted by Theologians, that in *Vasquez, q. 91. art. 1. dub. 2. n.* confession it suffices to state the *6., Reginald. Valenz. Medin.* circumstances which alter the *Zerola. Pesant. Sajir. Sott. Pitig.* species of sins. If therefore *Henriquez apud Bonac.* de Sac. Demoniality and Bestiality

disp. 5. q. 5. sect, 2. punct. 2. § belonged to the same very
3. diffic. 3. n. 5., et tradita per particular species, it would be
Theologos, quod in confessione enough that, each time he has
manifestandæ sint tantum fornicated with the Demon, the
circumstantiæ quæ mutant penitent should say to his
speciem peccatorum. Si igitur confessor: *I have been guilty of*
Dæmonialitas et Bestialitas sunt *the sin of Bestiality*. But that is
ejusdem speciei specialissimæ, not so: therefore those two sins
sufficit in confessione dicere: do not both belong to the same
Bestialitatis peccatum commisi very particular species.
quantumvis confitens cum
Dæmone concubuerit. Hoc
autem falsum est: igitur non sunt
ejusdem speciei specialissimæ.

7. *Quod si dicatur, aperiendum* 7. It may be urged that if the
esse in confessione circumstances of a sensual
circumstantiam concubitus cum intercourse with the Demon
Dæmone ratione peccati contra should be revealed to the
Religionem: peccatum contra Confessor, it is on account of its
Religionem committitur, aut ex offense against Religion, an
cultu, aut ex reverentia, aut ex offense which comes either from
deprecatione, aut ex pacto, aut the worship rendered to the
ex societate cum Dæmone (D. Demon, or from the homage or
Thomas, 2. 2. q. 90. art. 2. et q. prayers offered up to him, or
95. art. 4. in corp.); sed, ut infra from the compact of fellowship
dicemus, dantur Succubi, et entered into with him (*S.*
Incubi, quibus nullum *Thomas*, quest. 90). But, as will
prædictorum exhibetur, et tamen be seen hereafter, there are
copula sequitur: igitur respectu Incubi and Succubi to whom
istorum nulla intervenit none of the foregoing applies,
irreligiositas, et commixtio cum and yet *copula sequitur*. There is
istis nullam habebit rationem consequently, in that special
ulteriorem, quam puri et simplicis case, no element of irreligion, no
coitus, qui, si est ejusdem speciei other character *quam puri et*
cum Bestialitate, *sufficienter* *simplicis coitus*; and, if of the

Welcome to our website – the perfect destination for book lovers and knowledge seekers. We believe that every book holds a new world, offering opportunities for learning, discovery, and personal growth. That’s why we are dedicated to bringing you a diverse collection of books, ranging from classic literature and specialized publications to self-development guides and children's books.

More than just a book-buying platform, we strive to be a bridge connecting you with timeless cultural and intellectual values. With an elegant, user-friendly interface and a smart search system, you can quickly find the books that best suit your interests. Additionally, our special promotions and home delivery services help you save time and fully enjoy the joy of reading.

Join us on a journey of knowledge exploration, passion nurturing, and personal growth every day!

ebookmasss.com